

GREEK PHILOSOPHY AND THE CAPPADOCIAN COSMOLOGY

JOHN F. CALLAHAN

CONTENTS

I. Introduction	31
II. The Doctrine of Creation	33
III. The Nature of Time	36
IV. The Theory of the Elements	40
V. The Moral Significance of Cosmology	48
VI. Conclusion	53

I. INTRODUCTION

AMONG the works of the Cappadocian Fathers cosmology is treated most systematically in the *Hexaemeron* of St. Basil of Caesarea, a series of nine homilies devoted to interpreting the opening verses of Genesis with all the resources at the writer's disposal, theological, philosophical, scientific, and rhetorical. This work will be the chief object of our attention,¹ but many points of cosmological interest may be found in other works of the Cappadocians, especially in St. Gregory of Nyssa's book on the same subject, written after Basil's death to offer a fuller explanation of parts of the other's work. Though Gregory is offering ostensibly only a defense of certain points to which some exception had been made, by whom we are not sure, the two are not always in complete agreement. In addition to many differences in detail, we may note Gregory's tendency, in general, to be less literal in his interpretation of Genesis and to give freer rein to his philosophical ideas.

Basil offers the keynote of the Cappadocian cosmology in the opening lines of the *Hexaemeron*, saying that heaven and earth owe their origin, not to the accidental meeting of the elements, as some have thought, but to God.² This statement indicates at once that we are not dealing with a cosmology of the Aristotelian type, proceeding from an empirical analysis of physical phenomena and rising gradually from a consideration of the separate details of nature to their ultimate causes. Rather our approach, as we might expect, will be more akin to that of Plato's *Timaeus*, which, along with various works inspired by it, exerted a considerable influence on the Jewish and Christian commentaries on Genesis. In this type of cosmology we not only make inferences about the cause from the order and

¹ This paper follows, with very few changes, a lecture given at the "Symposium on the Cappadocian Fathers" held at Dumbarton Oaks in May, 1956. Because of limitations of time, therefore, many points of interest have had to be omitted or discussed only briefly. One of these is the problem of the differences among the Cappadocians, especially between Basil and Gregory of Nyssa, in the field of cosmology.

² *Hex.*, 4A. The text followed here is that of Stanislas Giet, *Basile de Césarée, homélies sur l'hexaéméron* (Paris, 1950), which is substantially that of the Benedictine edition, reproduced in the *Patrologia Graeca*, XXIX, 4–208. The pagination of the PG, retained by Giet, is used here. For the Greek sources of the Cappadocian cosmology the references given throughout the edition of Giet are very helpful, as is the discussion in his introduction, pp. 47–69. Also helpful is Yves Courtonne, *Saint Basile et l'hellénisme* (Paris, 1934). One may still consult with profit, though also with caution, Karl Gronau, *Poseidonios und die jüdisch-christliche Genesisexegese* (Leipzig, 1914), esp. pp. 7–112, on Basil's *Hex.*, and pp. 112–141, on the corresponding work of Gregory of Nyssa, *In hex. liber*. Additional works may be found in the bibliography of Giet, *ibid.*, pp. 78–83.

beauty, and indeed the very existence, of the universe, but our thought, by a reverse process, may proceed from what is true of God to an inference about nature. In this atmosphere, so favorable to the synthesis rather than to the isolation of the various objects of thought, we may also expect to find that some reference to man is relevant, that is to say, that in the study of nature there is a moral purpose. An important difference, however, between Basil and Plato is that for the Christian the causality of God in producing the universe is in no way mythical, and, in fact, the divine causality is accepted by Basil in the most literal manner possible. Moreover, this literal causality takes the specific form of creation, a concept which, understood in all its implications, is not to be found in Plato or in any other of the pre-Christian Greek thinkers. These differences are fundamental and affect Basil's interpretation throughout.

Basil's next point is also important as a keynote, namely, the spirit in which we should listen to the account given by Moses.³ Even if our own weakness prevents us from probing the depths of his thought, so great is our respect for his authority that we accord his statements a spontaneous and unqualified assent. Unlike the pagans, therefore, who lack such an authority, the believer may attain to a view of the universe that has its foundation in the teachings of God Himself, not in the so-called wisdom of this world. Basil emphasizes time and again that the account of Moses has for its chief purpose the edification of the Church and of our souls,⁴ and it does not attempt to offer an explanation of details in the universal order that are useless for man to know or too lofty for his intellect to comprehend.⁵ This is in contrast to the cosmological accounts of the pagan philosophers, which show how vain and empty is a purely human science, and how mutually contradictory are the views of all these thinkers.⁶ Thus the study of the universe in the light of God's teaching has a definite moral purpose, since our observation of its order and harmony will lead us to a greater knowledge and love of God.⁷ Moreover — and this is very important for Basil — our respect for the authority of Moses will induce us to accept his teaching literally, since an allegorical interpretation is merely a device for reading into his words the views of another.⁸

We see at the outset that the problem of cosmology for Basil is the problem of how to interpret the Scriptures when they speak of the universe.

³ *Hex.*, 4A–5C.

⁴ *Hex.*, 20C, 29A, 160D, 189A.

⁵ *Hex.*, 61C, 189A.

⁶ *Hex.*, 12A, 188C–D.

⁷ *Hex.*, 28A–B.

⁸ *Hex.*, 40B–C, 73C–76B, 189A.

He rejects the allegorical interpretation, which he claims to know well, though only from the works of others, because in effect it substitutes the thoughts of the interpreter for those of Moses, and writers who employ allegory for this purpose are like those men who interpret dreams according to their whims.⁹ This principle of Basil, however, is not applied inflexibly. We must, for example, recognize that since God's reality is ineffable Moses is obliged to employ figurative expressions in order to communicate to us some notion of God as far as this can be done in human speech.¹⁰ In particular, Basil believes he finds Moses offering hints about the second person of the Trinity in order to inspire us to search for Him with greater care, since the knowledge we acquire with difficulty we receive with joy and guard carefully.¹¹ But, on the assumption that we can infer what Moses implies from what he actually says, Basil achieves considerable freedom in his interpretation. This is in addition to the fact that there is often difficulty in knowing the meaning of the actual words employed in the Scriptures.¹² Basil's freedom, however, is not so great as that of Gregory, who follows a more moderate course between the literal and the allegorical, and who seeks a more specifically philosophical meaning in the Scriptural account. Aside from his own philosophical talents Gregory has a different end in view, as he points out that Basil was talking to a large and varied assemblage and was obliged to limit himself to a simple explication of the Scriptural text.¹³ For both men reason, limited though it be in its powers, can construct a cosmology by discovering the deeper meanings of Scripture through philosophical analysis. Not only does faith in God's word, however, determine which philosophical theories are acceptable, but, conversely, in both Basil and Gregory the cosmological theories with which they are familiar have a considerable influence on their exegesis. The interaction of the two fields may be observed in a number of the basic questions as treated particularly by Basil in the *Hexaemeron*, namely, (1) creation, (2) the problem of time, (3) the theory of the elements, and (4) the moral value of the study of nature.

II. THE DOCTRINE OF CREATION

In speaking of creation Basil insists that the universe owes its entire being to God, and that the universe, including the matter in it, has had a

⁹ *Hex.*, 188B–C.

¹⁰ *Hex.*, 45B–C, 56C.

¹¹ *Hex.*, 56A–C, 64A, 120D, 204C.

¹² Basil admits such a difficulty, e.g., with the expression, πνεῦμα Θεοῦ ἐπεφέρετο ἐπάνω τοῦ ὕδατος, 41C–44C. This passage is discussed *infra*, pp. 44–45.

¹³ *In hex. liber*, PG, XLIV, 64C, 65A.

beginning.¹⁴ Moreover, creation proceeds from God's will, which determines the fact of the universe's existence and the manner in which it exists even in the smallest part. The divine command is responsible for all of the laws of nature and the working out of these laws in the various stages proper to the development of the universe. Thus God's will, though in itself timeless, manifests itself by succession in the temporal order.¹⁵ But creation involves also God's thought, to which are due the order of the universe and the attainment by all things of their proper ends. Everything in the universe serves the divine purpose, and nothing is excluded from the divine providence.¹⁶ In particular, with reference to man, the universe may be called a school in which the souls of men come to know God.¹⁷ In fact, cosmology for Basil cannot be adequately understood unless we keep in mind that the universe is centered about man and must ultimately be explained in terms of the human destiny that had been foreseen by God in creation.

This conception of creation, though it cannot, taken as a whole, be called Greek, was largely anticipated in its individual elements by various Greek philosophers. For example, in the mythical account of Plato's *Timaeus* the universe begins to exist along with time through the voluntary action of an intelligent and beneficent cause, which must strive, however, to make everything as good as an opposing power of "necessity," related somehow to an independently existing matter, permits.¹⁸ In Aristotle matter cannot be considered independently of the ordered universe, which, however, is eternal; and nature, like art, acts for an end, and depends ultimately on an unmoved mover.¹⁹ In Plotinus, though the universe is eternal and even necessary, it is completely dependent, as all being is, on a first cause that is beyond being, one that does not create through any choice but is, on the other hand, in the highest sense free because it is capable of doing only what is best.²⁰ Basil, following what he conceives to be the plain meaning of the words of Moses, offers his own view of creation, in the process classifying and refuting the opposing views, since each contains some error. He is especially anxious to refute the dualistic position that involves an uncreated matter, pointing out that this view has its origin in a false analogy between God and the human artist, who must receive the

¹⁴ *Hex.*, 13C, 20A, 33A, 180C–181A.

¹⁵ *Hex.*, 17C, 81C–D, 104A.

¹⁶ *Hex.*, 113A, 160A–B, 197B.

¹⁷ *Hex.*, 12B–C; the universe is called *ψυχῶν λογικῶν διδασκαλείον καὶ θεογνωσίας παιδευτήριον*, *Hex.*, 16C.

¹⁸ *Timaeus*, 29E–30A, 38B, 47E–48A.

¹⁹ *Physics*, VIII, 1, 250b11–252b6; II, 8, 199a8–199b33; VIII, 8, 267a21–b26; *Parts of Animals*, I, 1, 641b11–26; *Metaph.*, XII, 7, 1072a19–b14.

²⁰ *Enneads*, III, 2, 1; V, 5, 9; VI, 8, 7.

material he works upon.²¹ He refers this position to heretics of his own day rather than to Plato, whose words have many echoes in Basil's account of creation, particularly in the statement, so prominent in later Greek philosophy, that the reason for creation is the goodness of God.²²

As to the manner in which the will of God accomplishes its effects, Basil's account would seem more anthropomorphic than that of Gregory, giving sometimes the impression that the works of creation demand successive interventions of God in the universe. Gregory quite explicitly states that creation is instantaneous and that in the created universe a seminal power (a Stoic notion later adapted to his own purposes by St. Augustine) is able, without further intervention on the part of God, to bring to light in the course of time all the changes that take place in created beings.²³ But Basil also insists that we should not interpret the creative act in too human a fashion, that we should not consider God as liable to the law of succession that applies to creatures. Just as a ball, he says, that is pushed down a hill keeps on rolling because of its own nature and the disposition of the ground, so the nature of things, moved by a single commandment continues its progress through a world of coming to-be and passing away.²⁴ It is likely, therefore, that many concessions made by Basil on this point are due to his following more closely the account of Moses for the benefit of a less sophisticated audience.

This receives confirmation in the explanation he gives of the word "beginning."²⁵ When Moses says that in the beginning God created heaven and earth, the "beginning" is to be understood in a temporal sense, because this was the first moment of time, which did not exist before the universe. (We may remark incidentally that he proceeds to offer four other meanings of "beginning" or "principle," meanings that bear a close resemblance to Aristotle's four causes, and that he finds all these meanings to be in some way applicable to the Scriptural account.) Basil, however, makes it clear that the temporal significance of the "beginning" of the universe does not imply that this first moment of time was itself a period of time possessing extension. He recognizes, in a way that is very Aristotelian,²⁶ that just as the beginning of the road is not itself a road, so the beginning of time is not a period of time, not even the smallest part of time. For if one were to

²¹ *Hex.*, 29C–33B.

²² *Hex.*, 17C. For Plato see *Timaeus*, 29E. Cf., e.g., Philo, *De opificio mundi*, 21, ed. L. Cohn (Berlin, 1896), p. 6, 12–18; Plotinus, *Enneads*, V, 5, 9.

²³ *In hex. liber*, PG, XLIV, 72A–B, 77D.

²⁴ *Hex.*, 189B–C.

²⁵ *Hex.*, 13C–17A.

²⁶ Aristotle, *Physics*, VI, 3, 233b33–234a24.

maintain that the beginning of time was itself a period of time, then it would be possible to imagine this beginning as possessing, like any period of time, a beginning, a middle, and an end. To avoid this absurdity we are to understand that the universe began to exist in an indivisible moment, and, in fact, some interpreters, says Basil, express the idea more clearly by saying that God created everything at once.²⁷

III. THE NATURE OF TIME

The problem of creation leads very naturally to that of time, which arises in many places in Basil's account. If we accept the principle that the universe was created to be the place where human souls were to be instructed, and where everything subject to birth and death would have a fitting home, then it was right for the universe to be temporal. For there is a natural affinity between all things in the universe and the progress of time, which continues unceasingly. Basil does not define time, but says merely that it is that of which the past is no longer, the future is not yet, and the present, even before we can know it, eludes our grasp. Such too is the nature of all becoming; and so it was fitting that all things subject by necessity to becoming should be enveloped by time. This is what is meant by the statement that in the beginning God created, that is, in a temporal beginning.²⁸

This envelopment of all becoming by time is made much more explicit by Gregory, for whom time, like space, is an extension or dimension that serves as a distinguishing mark of everything in the universe, in contrast to the being of God, which is possessed by Him in its infinite completeness without succession.²⁹ The notion of time as an extension (*διάστημα*) of motion goes back verbally to the Stoics, for whom time was an extension either of motion simply or of the specific motion of the universe.³⁰ But Plotinus had criticized this view, stating that the extension of motion does not differ from motion itself, and he had substituted another extension, that of the creative life of the universal principle of soul, in which all motion takes place.³¹ Gregory and Basil do not accept the idea of a universal principle of soul, but they retain, nevertheless, the Plotinian idea of time as an

²⁷ Ἐν κεφαλαίῳ ἐποίησεν ὁ Θεός, τουτέστιν, ἀθρώως καὶ ἐν ὀλίγῳ, *Hex.*, 17A.

²⁸ *Hex.*, 13B-C. Cf. *Adversus Eunomium*, I, 21, PG, XXIX, 560B.

²⁹ *Contra Eunomium*, III, Tom. VI, 66-67, ed. W. Jaeger, II (Berlin, 1921), 198, 14-199, 2 (PG, XLV, 793C-D).

³⁰ *Simplicii in Arist. categorias comm.*, ed. Kalbfleisch, *Comm. in Arist. graeca*, VIII (Berlin, 1907), 350, 15-16.

³¹ *Enneads*, III, 7, 8; III, 7, 11. This subject is discussed by Hans von Balthasar, *Présence et pensée, essai sur la philosophie religieuse de Grégoire de Nysse* (Paris, 1942), p. 6, n. 1.

extension in which motion is enveloped by something with characteristics similar to its own.

Gregory also refers to time, as well as to space, as a receptacle in which God created the physical universe, a receptacle, in fact, that was presupposed in creation, though not, of course, in any chronological sense.³² The notion of the receptacle comes, clearly, from Plato's *Timaeus*, where it is applied to space but not to time.³³ Plato attempts to distinguish carefully between the rôles of space and time in the universe, since space is assigned to the sub-rational realm, whereas time is given an important function in the rational ordering of the universe. Plotinus treats the parallelism of time and space with tantalizing brevity, saying simply that material things cannot exist at the same time any more than in the same place.³⁴ By this he means that material things, being on a lower plane of reality than immaterial things, are by their very nature so far from perfect unity and so far involved in multiplicity that their mode of existence must be both temporal and spatial. This consideration is an important one for Gregory, who finds in the temporality of creatures an outstanding mark of their inferiority to God, who is changeless in eternity. But, of course, there is another side to this picture. Plotinus remarks that for beings that cannot have their perfection all at once time is a good thing, and to eliminate their future would be to deprive them of perfection to which they can attain.³⁵ So Basil, speaking of each species of living things proceeding through many generations to the consummation of the universe, says that nature follows along the course of time, always fresh, as if she had just this moment begun her activity.³⁶

Basil is impressed by the fact that in the Scriptural account the first evening and morning of creation constitute not the first day but one day.³⁷ He wonders why it is not called the first day, since subsequent days are referred to as the second, third, and so on, and he looks for an explanation of this. First of all, God may have wished to determine precisely the duration of a full day as the unit of time, namely, twenty-four hours. Or possibly Moses indicates that each time there is one revolution of the heaven this will be considered one day, as a unit for the reckoning of time. But, continues Basil, one may prefer an explanation suggested by a tradition that comes to us

³² *Contra Eunomium*, I, 370, ed. Jaeger, I, 129, 26–130, 1 (PG, XLV, 365D–368A). The receptacle is called *οἶόν τι χώρημα δεκτικὸν τῶν γινομένων*.

³³ 52A–53A.

³⁴ *Enneads*, IV, 4, 16.

³⁵ *Enneads*, III, 7, 4.

³⁶ *Hex.*, 189C.

³⁷ *Hex.*, 49A–D.

from the mysteries. When God gave time its nature He bestowed upon it, as a measure and a sign of its passage, the duration of a single day. Then He commanded the individual day to repeat itself and fill out the course of a week so that the week in turn might, by its ceaseless repetition, number the movement of time. (Basil is clearly led by the Scriptural account of the six days of work and one day of rest to feel that the duration of a week has an especial significance in the reckoning of time. This is in contrast to the *Timaeus* of Plato, the ultimate source of Basil here, in which the more natural units of days and years are employed, rather than the seven-day week.) The first day, as a unit of time, may be called "one," Basil continues, in order to indicate that time imitates the perfect unity of eternity. In this way he suggests the Platonic account in the *Timaeus*, in which time is said to be a moving image of eternity, time moving according to number, and eternity abiding in unity.³⁸ It is interesting to note, however, that Basil is also dependent upon an unknown source, quite possibly Neo-Pythagorean, when he indicates that the periodic repetitions of the day and the week imitate the perfect circle of eternity, and the day is therefore called one, not first, in imitation of the unity of eternity. This passage also occurs, in practically the same words, in Joannes Lydus,³⁹ and it is clear that Basil has altered his original source inasmuch as it had stated that time is eternal, which it cannot be for him, but he has adapted the rest of the passage to his own argument. In this case Basil's reading in philosophy has led him to offer an interpretation of the words of Moses that is not readily suggested by the words themselves. So, he concludes, the first day has been given by the Creator an especial dignity of its own, and is thus not counted in the same way as the others.

Day and night were produced by the separation of the light and the darkness, which were placed in complete opposition to each other by the will of God after the creation of light. One could not then call day the air illuminated by the sun, or night the shadow that comes when the sun disappears. Day and night were then determined, not by the rhythm of the sun's motion, but by that of this first-born light, which spread over the world and then retired in accordance with the measure of time fixed by God. The fact that evening, which is the end of the day, is mentioned before morning, which is the end of the night, indicates that day is given the dignity of priority;

³⁸ 37D.

³⁹ *De mensibus*, III, 4, ed. Wuensch (Leipzig, 1898), p. 39, 4-7, 14-15. The parallel is discussed by Gronau, *op. cit.*, pp. 39-41, and by Giet, *op. cit.*, p. 182, n. 2. (Cf. Joannes Lydus, *ibid.*, II, 4, ed. Wuensch, p. 21, 3-10.)

for the state that existed before the creation of light was not night, but darkness, since night is so called only in opposition to day.⁴⁰

Though all this takes place on the first day of creation, it is not until the fourth day that the sun and moon are created. Basil gives no indication that he foresees all the difficulties presented by this sequence, which Gregory is later obliged to take up in greater detail. His explanation is that earlier it was the nature or essence of light that had been created, and now the body of the sun is prepared to serve as a vehicle of the light whose birth had preceded its own. In the same way we can distinguish between fire, which has the power of giving light, and a lamp, which makes the light of the fire available to those who need it. To support his position Basil argues that we can readily distinguish a quality from the substrate to which it is added. Though man cannot, it is true, separate the light from the sun, those things that he can separate in thought may be separated in reality by the author of their natures. So the fire in the burning bush through the power of God gave off light, but held in abeyance its power to burn. Moreover, if we look at the phases of the moon we perceive that its light increases or decreases while its substance remains the same, thereby enabling us to distinguish between the body of the moon and its power to illuminate. The sun has received light in such a way that the light is now inseparably mixed with its own substance, but the example of the moon teaches us that the same principle is applicable to the sun.⁴¹

The sun and moon were assigned the functions of separating day and night, and they manifest the same opposition that light and darkness did from the first moment of creation. For the sun was made by God for the measurement of day; and the moon, when it is at the full, is truly queen of the night, for then it is at its greatest opposition to the sun. It is unimportant that the light of the moon may not coincide perfectly with the night during its other phases, for in its most perfect state the moon with its light rules over the night, surpassing by far the light of the stars, and it shares equally with the sun the measurement of time, that is to say, the seasons, days, and years. But we should note, warns Basil, that these heavenly bodies *mark* the days, according to Scripture; they do not *make* them. For day and night existed before they were created. It would be a mistake, therefore, to define the day as the air illuminated by the sun, or the time during which the sun remains in the hemisphere above the earth.⁴²

⁴⁰ *Hex.*, 48B–C.

⁴¹ *Hex.*, 121A–124B.

⁴² *Hex.*, 124B–125A, 137A–B.

IV. THE THEORY OF THE ELEMENTS

Having considered the problems of creation and time, we can now turn to one of the traditional theories that Basil finds most useful for his interpretation of Scripture, that of the four elements constituting the universe. This theory, which had been employed from an early date by philosophers and scientists of all kinds, and which had been used by Aristotle in all phases of his natural philosophy, especially in his theory of motion, had passed into general acceptance long before the time of Basil, and he avails himself of it at every opportunity. He introduces this theory after pointing out that, when Moses speaks of God creating heaven and earth, he offers thereby the two limits of the universe, and intends us to understand that everything between the two was likewise created.⁴³ (One recalls Plato's statement in the *Timaeus*⁴⁴ that the soul of the universe, being of greater dignity, was created before its body when Basil tells us that heaven is mentioned before the earth because of *its* greater dignity.) Although the Scripture says nothing of the other elements at this point, it is the task of our intelligence to understand that in earth all the other elements were present. He gives traditional examples, pointing out that sparks of fire are thrown off by rocks and by iron, both of which are constituted by earth; and it is indeed a remarkable thing that fire can be imprisoned in these materials without destroying them. As for water, we can ascertain from the existence of wells that it is contained in the very bosom of the earth. That air also is present in the earth is shown by the vapors that arise when the damp earth is warmed by the sun. In addition, Basil points out, following Aristotle,⁴⁵ that different elements have their own proper natural positions in the universe; the heaven occupies the higher place and earth the lower, seeing that the lighter bodies rise toward the heaven while the heavier ones fall naturally to the earth. Thus the high and the low manifest mutually the most complete opposition, and Moses speaking of things that are by nature the farthest separated indicates implicitly those that occupy the intermediate positions. So we should not look for a detailed explanation of all the elements in his account, but should infer that which is not mentioned from that which is explicitly stated.

This last rule of procedure, however, has definite limits for Basil, as we at once discover with the question of what substance the heaven is made.⁴⁶

⁴³ *Hex.*, 20A-C.

⁴⁴ 34C.

⁴⁵ *On the Heaven*, III, 2, 300a20-31.

⁴⁶ *Hex.*, 20C-21A.

He says that to inquire into the substance of all the beings that are the object of our study would be too time-consuming, and besides there would be too little reason for occupying ourselves with these questions; after all, our primary purpose is always the edification of the Church. He relents, however, so far as to tell us that, for our purposes, the simple explanation of Isaias — his likening of the heaven to smoke — is sufficient; that is to say, the heaven must be a substance that is light and in no way solid or thick. He says somewhat later, however, that its substance must be opaque in order to keep out the light that illuminates the blessed spirits above the universe.⁴⁷ Just as Isaias had said that the heaven has been placed like a vault, Basil and Gregory consider it spherical, enclosing within all the sensible universe.

However, Basil is not entirely satisfied to let the matter drop at this point, and he tells us that the philosophers have offered various explanations of the substance of the heaven. Some, for example, have said that it is composed of the four elements, of earth because it offers resistance to the touch, of fire because it is visible, and of the other two elements, air and water, because they are mixed with the first two. (This view plainly has its basis in the *Timaeus*.)⁴⁸ Others, he continues, referring to the view of Aristotle,⁴⁹ have rejected the theory that the heaven is formed of these four elements, because the motion that is proper to them is rectilinear, whereas the motion of the heaven is circular, and requires a fifth element, which possesses by nature a circular motion. Moreover, the adherents of this last view, says Basil, point out that it would be impossible to produce a constant motion in a body constituted by diverse elements, which are in opposition to one another, and whose conflict would eventually destroy the body they composed. Basil himself does not attempt to evaluate these divergent theories, but points out, as he is fond of doing, that philosophers have a way of refuting one another, and if we were to go into the details of this subject we should fall into the same futile practice.⁵⁰

While discussing the earth Basil cautions us not to turn our attention to fruitless research into its substance or to exhaust ourselves to discover by reason that which exists beneath what is readily apparent. In particular, let us not seek a substance, completely deprived of qualities, that would exist without any properties whatsoever. Let us rather realize that all the qualities that we see in the earth cooperate to give it existence and to complete its essence. If, on the other hand, one attempts to eliminate by reason

⁴⁷ *Hex.*, 41A–B.

⁴⁸ 31B, 32B.

⁴⁹ *On the Heaven*, I, 2, 268b13–269b17.

⁵⁰ *Hex.*, 25A–28A.

one after another of the qualities that exist in it one ends up with nothingness. That is to say, if we abstract the qualities black, cold, heavy, dense, and all the others that can be perceived in it, its substance will exist no longer.⁵¹

These lines suggest a theory of matter such as may be found in Gregory. He says that there is no body that does not possess color, shape, resistance, extension, weight, and various other qualities, and, in fact, it is their converging that gives existence to bodies. For Gregory each of these properties is something intelligible and originates in an act of the divine intelligence. Thus qualities that are in themselves spiritual come from an incorporeal nature to join in the formation of bodies.⁵² This theory will remind us of the Neo-Platonists who attempted to analyze bodies into incorporeal qualities.⁵³ But they recognized that there is an ultimate material substrate, whereas Gregory, going farther, tends to dissolve all matter into these qualities, just as Basil in this last passage warns us that the element earth is capable of being analyzed out of existence.

In taking up the question on what foundations the earth rests Basil advises us not to search for an answer, for our thought would be seized with dizziness and our reasoning would not produce any certitude. If we adopt the explanation that the earth is supported by a lighter substance, such as air or water (a view we can discover in some of the Pre-Socratics),⁵⁴ we shall be hard pressed to explain how the earth can be supported by a substance so soft and light, one that would tend when subjected to pressure to run off in all directions. In the case of water, in particular, we should also have to discover what container there is for it. If, on the other hand, we suppose that there is a body heavier than the earth to keep it from falling, we shall then have need to look for another to sustain it, and so on to infinity, says Basil, using a favorite argument of Aristotle. We should therefore place a limit on our thoughts and avoid the reproach made to Job when he was seeking to know realities beyond his comprehension. We should listen to the Psalms when they tell us that God made firm the columns of the earth. These columns are the divine power supporting the earth and, whatever explanations may be offered by reason, we should never forget that the Psalms also tell us that in God's hand are the boun-

⁵¹ *Hex.*, 21A-B.

⁵² *De hominis opificio*, PG, XLIV, 212D-213B. Balthasar, *op. cit.*, p. 20, n. 5, suggests that the χώρημα δεκτικόν (see n. 32 *supra*) somehow takes the place of ἰλη for Gregory. This would perhaps represent a tendency on Gregory's part to return to a more properly Platonic doctrine.

⁵³ E.g., Plotinus, *Enneads*, IV, 7, 8¹. On this point see H. Cherniss, *The Platonism of Gregory of Nyssa* (Berkeley, 1930), p. 26.

⁵⁴ Aristotle, *On the Heaven*, II, 13, 294a28-30, 294b13-16.

daries of the earth. That statement is the most certain teaching we could receive, and those who hear it will profit therefrom.⁵⁵

With regard to the immobility of the earth Basil once again employs the theory of the elements to suggest a plausible reason. He first offers the theory, reminiscent of Anaximander,⁵⁶ that the central position occupied by the earth is such that, being equidistant from the extremities of the universe, there is no reason why it should go in one direction rather than in another. Thus it must remain where it is. But to supplement this explanation Basil affirms that this central position is held by the earth not through mere chance, but because such a position is natural and necessary. For the body of the heaven occupies the extreme height of space and the heavier masses falling from above come together from all directions to the center. If then stones, wood, and all earthly bodies fall toward the center this will be the natural and proper position of the earth as a whole. For Basil, as for Aristotle, this tendency on the part of earthly substances to fall toward the center indicates that for the earth itself this is the natural position, and we should not be surprised that the earth does not fall in one or another direction, since it has its natural place at the center. Thus the explanation suggested by Basil is based on the natural rectilinear motions of the elements. He adds, however, that if any such hypothesis seems reasonable one should admire the wisdom of God, who has ordered the elements in this manner. For a mighty work occasions no less wonder after one has discovered the way in which it operates. If, however, one does not wish to accept any hypothesis of this kind, let us remember that the simplicity of faith should be stronger than rational demonstrations.⁵⁷ Basil is even more non-committal regarding the shape of the earth. Though he mentions different opinions variously claiming it to have the form of a sphere, a cylinder, and so on, Moses, he tells us, is no more interested in this question than in that of the perimeter of the earth, which some have estimated. For he keeps his silence on points that are useless to us.⁵⁸

When Basil comes to explain how the earth was invisible and formless he is led once again to make certain inferences. He points out first that Moses has been silent with regard to the elements water, air, and fire, as well as to bodies made from the elements. Although all these things were evidently in existence, the Scriptural account has not mentioned them so that we may be inspired to make inferences about them. It has not been said, for example, that God created water; but it has been stated that the

⁵⁵ *Hex.*, 21B–24B.

⁵⁶ Aristotle, *On the Heaven*, II, 13, 295b11–16.

⁵⁷ *Hex.*, 24B–25A.

⁵⁸ *Hex.*, 188C–189A.

earth was invisible. It is up to us, therefore, to ask ourselves what substance concealed it from view. Obviously it was not fire, for fire illuminates the objects close to it. Nor can we say that air concealed the earth from sight, for the air is light and transparent. Water remains, therefore, as the substance covering the surface of the earth, for water had not yet been confined by the divine command to its own proper domain. For this reason also the earth was formless, since the excessive moisture prevented it from producing all those growing things that give it its form, that is, the beauty that belongs to it.⁵⁹ (This formlessness of the earth is interpreted by Gregory as indicating matter in a state of potentiality,⁶⁰ but Basil is, as usual, more literal.)

Basil is so firmly convinced that the four elements form the necessary material basis of the universe that he is anxious to find in the Scriptures concrete indications of all of them. When Moses says that the spirit of God was borne upon the waters, Basil suggests that by the word "spirit" he means the breath of air. For Moses, intending to enumerate all the elements, says that God created heaven, earth, water, and air. (We note that in this statement the heaven takes the place of the element fire, although earlier Basil has refused to commit himself on the substance of the heaven.) For the list to be complete, we are now told that air was spread over the deep. Basil goes on to specify, however, that a truer and more venerable explanation is that the Holy Spirit is referred to in these words of Moses. (In various instances Basil likes to discover references to the second person of the Trinity, the divine Word,⁶¹ and it is not surprising that he finds evidence here for the third person.) In accepting this interpretation, he says, one will find much profit.⁶² It is this second interpretation that is offered by Gregory, who will not accept the other more material meaning even as a hypothesis. This fits in with other elements of Gregory's interpretation, for example, that the waters which are above the firmament belong to the spiritual rather than to the material creation.⁶³

In considering how the Holy Spirit was borne upon the waters, Basil offers an interesting explanation which he attributes to a certain Syrian. The word "borne" in the Syriac language is more expressive and, because of its relationship with Hebrew, is doubtless closer to the meaning of the Scriptures. According to this interpretation, "was borne upon" would mean "warmed" and "made living," after the image of the bird that hatches its

⁵⁹ *Hex.*, 33C–36B.

⁶⁰ *In hex. liber*, PG, XLIV, 77D–80A.

⁶¹ *Hex.*, 56A, 64A, 120D, 205A.

⁶² *Hex.*, 41C–44A.

⁶³ *In hex. liber*, PG, XLIV, 81A–D.

eggs and brings them to life by warming them. In this case we would look upon the Holy Spirit as preparing the substance of the water to produce living things, so that there would no longer be any question, such as some have raised, about the active participation of the third person of the Trinity in the act of creation.⁶⁴

Basil's discussion of the divine order given to the waters to come together in one place is also based in some measure on his understanding of water as a primary element. If one were to object to the Scriptural account by saying that water naturally tends to seek the lower places on the surface of the earth and that the divine command is therefore superfluous, we should reply that the nature of water as we know it, with all its qualities and powers, was constituted by God's creative act. Thus the order given to water and to all other things in creation determined once and for all the rule to be followed thereafter. Similarly day and night, once produced by God, do not cease to follow one after the other and to divide time into equal parts. One concrete indication of the power of the divine command is the way in which the sea is restrained within its boundaries, however much the winds may rage upon it, and sand, which is the most fragile of all things, is able to set a boundary even to the violence of the sea. The objection has been raised that we cannot speak of a single gathering of water, since there are many bodies of water on the surface of the earth. Basil answers that the existence of numerous bodies of water makes no difference, since the Scripture is referring to the principal and the greatest gathering of the liquid element. We note that fire also is broken up into small portions, while its large mass extends through the ether. Air likewise is divided into small portions although its mass as a whole envelops the earth. This leads Basil to discuss various bodies of water, but he concludes that there is only a single ocean, as reported by those who have travelled widely.⁶⁵

With regard to the appearance of the earth Basil considers it very significant that in the Scriptural account we are told that when the waters gathered into a single place the dry element appeared, and God gave it the name of "earth." The name "dry" was chosen because it offers the nature of the thing, just as the word "reason" gives the peculiar characteristic of man. And so the quality of dryness is that which belongs properly to the earth, and to this thing the name of "earth" is then added. This is a consideration that Basil, following Aristotle,⁶⁶ proceeds to extend to all the elements, each one of which has received a particular quality that distinguishes it from the

⁶⁴ *Hex.*, 44A-C.

⁶⁵ *Hex.*, 81A-88A.

⁶⁶ *On Coming to Be and Passing Away*, II, 3, 331a3-6. But cf. *Meteor.*, IV, 4, 382a3-4, where water, not air, is said to be most representative of the moist.

others and permits us to recognize it for what it is. Water has for its especial quality cold; air, moisture; and fire, heat. This separation, however, is one that the mind conceives. When the elements actually constitute bodies and fall within the scope of our senses these qualities are all united. Nothing is completely isolated, simple, and pure in the sensible universe, he says in the spirit of Anaxagoras. Rather earth is at the same time dry and cold; water, moist and cold; air, warm and moist; and fire, warm and dry. As a result of possessing a combination of qualities each element has the power of being joined to another, through the quality the two have in common; for example, earth can be joined to water because of the cold that the two have in common. Since the same can be said of the other pairs of elements, we find that they form in their entirety a circle, indeed a kind of harmonious dance by virtue of their mutual accord. Basil even wishes to discover in the word "element" (στοιχείον) an etymology that offers the notion of progression, thinking of its relation to the verb "march" (στρίχω). For these reasons, he concludes, God gave to the dry element the name of "earth" instead of calling earth the dry element. For the dryness is not a quality added to earth from without, but rather a characteristic that from the very beginning constituted its essence.⁶⁷

The various elements, and even the most different parts of the universe, says Basil, have been joined by God through a law of unbreakable friendship, and such harmony exists throughout that even beings most widely separated seem united by a common bond of sympathy.⁶⁸ We can see here the Stoic idea of "sympathy," though doubtless also the inspiration of Plato.⁶⁹

One of the most interesting examples of the use that Basil makes of the philosophical tradition and, in particular, of the theory of elements is found in his discussion of the separation of the waters by the firmament. He has already insisted at some length that, since the firmament is mentioned separately and given the specific function of separating the waters, it must be different from the heaven that was created in the beginning, though the firmament also is referred to by the name of "heaven." Basil,

⁶⁷ *Hex.*, 89A–92B. W. Jaeger, *Nemesios von Emesa* (Berlin, 1914), pp. 87–94, points out that the circle of elements as developed by Basil here has a close parallel in Nemesius. He believes that the synthesis of Platonism and Aristotelianism found in this conception, along with other factors, points to Posidonius as the common source.

⁶⁸ *Hex.*, 33A.

⁶⁹ *Timaeus*, 32B–C. Cf. Cicero, *De natura deorum*, II, 7, 19. Jaeger, *Nemesios*, p. 113, discusses Basil's use of *φιλίας δεσμῶ* (Giet, *op. cit.*, reads *θεσμῶ* in Basil, *Hex.*, 33A), and, p. 113, n.1, Gregory's use of such a conception; he traces, pp. 96–120, the history of the widespread notion of the unity of nature, pointing out, e.g., p. 113, that many of the terms employed by Basil in discussing creation, *Hex.*, 20A, belong to this tradition.

who is not the first to make a distinction between the firmament and the heaven, criticizes traditional views that there can be only a single heaven, affirming that there may indeed be many; this would surely not be any more strange than the unfounded theory of the spheres that produce a beautiful harmony by their movement.⁷⁰ He is also critical of allegorical interpretations, such as that which identifies the waters above the firmament with good spirits, and those below with evil ones.⁷¹ Gregory differs with Basil on this point, interpreting the higher waters as belonging to the intelligible world.⁷² But for Basil all the waters must be taken literally.

He first raises the question why there was such a superabundance of water in the beginning. He finds the reason for this in the element fire, which is necessary both for the general economy of the universe and for its consummation. The elements water and fire are mutually opposed and tend to destroy each other, fire because it is the more powerful, water because of its abundance. Now there cannot exist any truce⁷³ between the two, nor can either be lacking in a complete universe. So God, in ordering the universe, created water in such abundance that, though it is gradually consumed by the power of fire, it can nevertheless continue to exist. God knew how long the universe would continue in being and therefore how much nutriment would be required for fire before the universe should come to an end.⁷⁴ We are reminded of the present-day scientists who can, by measuring the amount of radio-active carbon that has been lost through the course of time, determine the age of a piece of ancient wood. So Basil, if he were able to measure the amount of water in the present universe and to calculate the rate at which it is consumed, would presumably be able to tell us how much time remains for the universe to endure.

Following a theme that we can readily discover in the works of the Stoics, including perhaps Posidonius,⁷⁵ Basil discourses on the important rôle that is played by fire in the universe. Not only is fire required for many of the human arts, but without it plants would not grow or animals be generated. It was therefore necessary that water exist in great abundance to hold its own in this uncompromising and endless struggle with the devouring power of fire. Despite the abundance of water, a time will come when fire will have consumed everything. Basil is undoubtedly influenced here by the Stoic theory of the final conflagration. It is in the light of this theory

⁷⁰ *Hex.*, 56C–60A.

⁷¹ *Hex.*, 73C–76A.

⁷² See n. 63 *supra*.

⁷³ Surely this is the meaning of *στάσις* here rather than “*discorde*,” as Giet, *op. cit.*, p. 215, translates it, or “*seditio*,” as it is translated in *PG*, XXIX, 66A.

⁷⁴ *Hex.*, 64C–65A.

⁷⁵ See Gronau, *op. cit.*, p. 78, n. 1.

that he interprets from Isaias the words addressed to the deep: "Be thou desolate, and I will dry up thy rivers." After such an interpretation he adds, curiously enough, that here again one should reject the foolish wisdom of this world and take to heart the true doctrine, which, though expressed in ordinary language, offers us a knowledge that is infallible.⁷⁶

In view of the certainty of the eventual conflagration Basil explains not only the great abundance of water, but also the manner in which the waters are separated by the firmament.⁷⁷ The firmament must be imagined, he says somewhat tentatively, as a place capable of separating moisture by filtering the lighter portions through to the higher regions and returning the heavier ones to the earth, thus diminishing the amount of water in the universe. At this point he launches an attack on some imaginary opponent, doubtless a Peripatetic, who does not believe in the gradual diminution of water in the universe, and who holds, as does Aristotle,⁷⁸ that all the water that evaporates from around us eventually falls back to the earth in the form of rain. Basil engages in a lengthy and rather detailed criticism of Peripatetic scientific doctrine and then turns briefly to criticize the opposing side, indicating that through the larger part of this discussion he may be using Stoic authorities, against whom he now directs his criticism. The universe, they say wrongly, when it has been consumed by fire, will be reborn from the seeds that persist in its ashes, and it will be destroyed and reborn time without end.

As a matter of fact, Basil himself believes in a rebirth, not the rebirth of the same universe, however, which would seem to him pointless and unnecessary, but a rebirth in another order, one that is proper to the new conditions of the human soul. Thus in this instance he makes a clear-cut choice between what seem to him definitely opposing points of view, and it is the Stoic doctrine in whose light he interprets the words of Scripture. Toward the end of the road along which he has travelled with the Stoics on this particular journey he parts company with them, because he does not believe in the indefinite rebirth of the universe. But even here he may accept the doctrine of rebirth by giving it a new meaning that is in accordance with his faith.

V. THE MORAL SIGNIFICANCE OF COSMOLOGY

After looking at creation, time, and the elements, we note that in the cosmological tradition of which the Cappadocians form a part the moral

⁷⁶ *Hex.*, 65A–68B.

⁷⁷ *Hex.*, 68B–73C.

⁷⁸ *Meteor.*, I, 9, 346b26–31.

significance of the universe and of our study of it is never far from our attention. In the first place, as Basil points out at the very beginning of his work,⁷⁹ the soul of man must be disposed in a certain way in order to understand the teachings of God. It must be purified of all the passions of the flesh, freed from the darkness into which it is cast by the cares of life; it must be eager, zealous, and ever questing for a knowledge of God that is in some way worthy of Him. That is to say, the moral condition of man will make him more or less receptive to the study of nature and to the teachings of Scripture thereon.

On the other hand, the study of nature and the acceptance of the Scriptural account have a moral purpose insofar as they lead man to a better knowledge of God. This point of view is evident in the many passages in which Basil speaks of the beauty of the universe, a beauty to be found wherever man turns his attention. The wisdom and intelligence of God shine forth from His works, and the beauty of visible things will give us an idea of Him who is above all beauty; the grandeur of those bodies whose existence and limits are revealed to us by our senses will permit us to conjecture by analogy something of the infinite being, supremely great, whose power is beyond all thought. Though we know little of the true nature of things, that which comes within the range of our senses is filled with so much wonder that even the best mind, when faced with the least of creatures, is unable to study it as it deserves or to praise its Creator in a fitting manner.⁸⁰

Our admiration of God's creative power may begin with the basic elements, each of which carries within itself some evidences of a beneficent Creator. In this great universe, which is, as it were, the workshop of divine creation, we can look on the heaven, extended above us like a vault; on the earth, boundless in size and weight, resting firmly on itself; on the air, whose substance, spread out everywhere, offers perpetual nourishment to our breath, and adapts itself to our every motion through it; and on the water, which serves so well the needs of life.⁸¹

We can also observe in the more complex parts of the universe a beauty that reveals to us the wisdom of God. On a clear night, for example, if one gazes upon the inexpressible beauty of the stars, which like flowers embroider the firmament, and if one then reflects that beyond the pleasant appearance there is a necessary law; if, moreover, one gazes upon all the marvels of the day, one cannot help thinking of the author of the universe, who, though invisible, may be conjectured from His visible effects. Then

⁷⁹ *Hex.*, 4A.

⁸⁰ *Hex.*, 28A-B.

⁸¹ *Hex.*, 80B-C.

Basil, making use of a figure that was Stoic by tradition,⁸² compares the universe to an ordered city, but he is not satisfied to employ this figure, in the traditional manner, to prove the existence of a divine power. He goes on to make inferences about another city, to which he offers his services as our guide, a city that is not the visible creation, but one that could exist only in the divine thought. This is the city that was our ancient home, our native land, from which man has fallen, and to which he can return by overcoming the effects of sin. If the greatness of the heaven surpasses human understanding, what intelligence is there that will be able to discover the nature of that which is eternal? If the perishable sun is so beautiful, so large, so swift and regular in its revolutions, of a size proportionate to that of the universe as a whole, and of a beauty that makes it a shining eye in the midst of nature — if all this is true of the perishable sun, what then will be the beauty of the sun of justice? And if the blind man suffers a loss in not being able to see this sun, what loss will it be for the sinner to be deprived of the veritable light?⁸³

In discussing the beauty of light, Basil considers whether bodily beauty owes its existence to the symmetry of the various parts, as the Stoics had indicated. If this is the case, how could God see that the light was beautiful? Is it not rather that the beauty of light comes from the pleasant appearance that it offers to the eye, just as gold is beautiful, not through the disposition of its parts, but rather from the fact that its color charms our sight? The evening star is the most beautiful of the stars, not because of any symmetry of its parts, but because the brightness it communicates to our eyes is so pleasant.⁸⁴ This view of Basil resembles that of the Stoics,⁸⁵ but goes farther in accordance with the more penetrating doctrine offered by Plotinus.⁸⁶

Basil's idea of beauty is not limited, as it had been for some, to the symmetry of parts in a complex body, or to the capacity of a simple body to produce a pleasant impression on the senses. These are the superficial aspects of the beauty that is to be found in the universe. There is a deeper, more significant phase of beauty, namely, the perfection that a thing possesses when it realizes the end for which it was made. When Scripture tells us that God saw that His work was beautiful, God is like the artist who, even before bringing to light the whole work that he is producing, is able to appreciate the beauty of the various parts, and he praises them by relat-

⁸² See Cicero, *De natura deorum*, II, 5, 15-6, 18.

⁸³ *Hex.*, 117B-120B.

⁸⁴ *Hex.*, 45C-48A.

⁸⁵ Cicero, *Tusc. disp.*, IV, 13, 31.

⁸⁶ *Enneads*, I, 6, 1. See Paul Henry, *Les états du texte de Plotin* (Paris, 1938), pp. 172-173.

ing them in his thought to the eventual end assigned to them.⁸⁷ This is a notion suggested by Aristotle,⁸⁸ when he tells us that the end that governs the constitution or production of a being is that which gives it also its beauty. But Basil is probably influenced also by the remarks of Plotinus on this subject.⁸⁹ When God is said to perceive that the sea was beautiful, the reason is not that the sea was pleasant to His eyes, since God contemplates beings by His ineffable wisdom, not with the eyes of sense. Surely the sea does present a pleasant sight to the eyes, but the reason for its appearing beautiful to God lay in the perfection with which it took its proper place in the divine plan, and this chiefly through being the source of all moisture necessary to life on earth.⁹⁰ For Basil it is necessary that each part of the universe possess its own proper beauty in order to contribute to the beauty of the whole. After creating the heavenly bodies God fills the waters with living things so that this part of the world too may have its share of beauty. Previously the earth had received its beauty in the plants that it produced; the heaven had received its decoration of stars and, in particular, the two luminaries that are its chief embellishment. Now it was the turn of the waters to receive their beauty. Thus the conception of beauty that is most significant for Basil involves the teleology of the universe and ultimately the divine wisdom, in which all things are planned.⁹¹

But over and above the beauty to be found in the universe Basil finds moral lessons for man in many plants and animals. For example, he considers a flower to be an image of human life, as we are told in Isaiah that all human glory is like the flower of the fields. For the shortness of human life, its short-lived joys, and the swift passing of prosperity, all these have found their most proper image in the words of the prophet.⁹² Basil also looks to the moon to give us counsel regarding the affairs of human life. It too reminds us of the swift change that is possible in the fortunes of man, and we shall thus avoid glorying in our power or being unduly proud of our prosperity. We shall thereby scorn the flesh, which is subject to these changes, and have a higher regard for the goods of the soul, which do not change.⁹³

While we may look to nature for the many lessons she can teach us, and for many signs that are helpful in the conduct of human affairs, such as those to be found in the heavenly bodies and in the phenomena of meteor-

⁸⁷ *Hex.*, 76C–77A.

⁸⁸ *Parts of Animals*, I, 5, 645a24–26.

⁸⁹ *Enneads*, I, 6, 2–3.

⁹⁰ *Hex.*, 92B–C.

⁹¹ *Hex.*, 148A–B.

⁹² *Hex.*, 97C–100B.

⁹³ *Hex.*, 141C.

ology, Basil goes to lengths to warn us against the interpretations of the astrologers. Aside from the many details that make this pseudo-science ridiculous, Basil objects to the fact that the influence of the so-called evil stars may somehow be attributed to God, who made them. If, on the one hand, their evil springs from their nature it is the Creator who is then responsible for the evil. If, on the other hand, their evil influence is due to their will, we must see in them beings endowed with free and independent impulses, a supposition that is most foolish, since it attributes these powers falsely to inanimate things. Moreover, it is irrational to assign to each person good and evil, not according to his personal merits, but according to the accidental position of the heavenly bodies. For our good and evil actions, according to the astrologers, would not have their principle in us, but in conditions that result necessarily from our birth. Thus the law-givers who tell us what we should do and not do, the judges who reward virtue and punish vice, all these would be acting in vain. Where necessity and destiny rule there is no longer any place for human merit, upon which is based the just judgment of God.⁹⁴ Basil, needless to say, is following closely the Christian tradition in dismissing the claims of astrology. Plotinus also is critical of the astrologers, though he admits that on occasion there is some value in their horoscopes, the basis of which is that the universe is an organism, in which there is a sympathy of one part with all others.⁹⁵

When speaking of the darkness that covered the deep Basil has occasion to refute the view that this represents a principle of evil opposed to the goodness of God and independent of God. The presence of these two independent principles would lead to a constant and unending struggle in the universe, made up of partial victories and defeats. If the power of good should win, evil would then be completely destroyed. But if, on the other hand — here Basil breaks off, since this is a hypothesis that one should not even formulate. After refusing to accept the existence of a supreme principle of evil he says that we cannot attribute evil to God as its principle. For nothing comes from its own contrary, just as life does not produce death, or darkness, light. But if evil does not come from God, whence does it come, since no one who lives will deny that evil exists? We must look for the origin of evil in a condition of the soul that is opposed to virtue and arises from a falling away from good. This view of Basil may be found also in large measure in Plotinus,⁹⁶ for whom evil is defined as the privation of good, a view that was destined to be most influential in subsequent philosophy. We

⁹⁴ *Hex.*, 128A–133C.

⁹⁵ *Enneads*, II, 3.

⁹⁶ *Enneads*, I, 8.

must look for the origin of evil, Basil says, in those evil actions that are freely willed. For if evil were not willed and did not depend on us, the laws that punish evildoers would be without justification. However, things like illness, poverty, the loss of honors, death, and the various unpleasant events that happen in human life should not be counted, strictly speaking, as evils. Some of these even bring benefits to those who suffer them.⁹⁷

Thus Basil argues against the supreme principle of evil, advanced by the Manichaeans, by indicating that evil is essentially a privation of good and not something that exists positively and independently. It is his conviction, in which he differs also with the Gnostics, that the universe is good; it is the deliberate handiwork of a good cause, and its existence is in no way an accident or a mistake, but in its goodness and beauty it serves the purpose of an all-wise Creator.

VI. CONCLUSION

We see thus in a selection of topics from the *Hexaemeron* how Basil has sought to interpret Genesis by means of what he calls "the wisdom of the world." This so-called wisdom is a body of doctrines, capable of many internal variations, that had come into existence long before his time and was suitable for employment in a work of philosophy, such as a commentary on the *Timaeus*, or in a commentary on Genesis. His attitudes toward these traditional doctrines show a wide range of variety. Some theories, such as that of the four elements constituting things, he accepts without much question. Others he transforms to his own purposes in a radical way, as, for example, that of the eventual conflagration and the consummation of the universe. Some he proposes tentatively, in some cases even offering alternatives. Sometimes he dismisses the matter as being unnecessary for man to know and beyond the range of human speculation. Finally, he is quite often happy to exhibit conflicting doctrines in order to show the futility of a purely human science.

The chief sources employed by Basil, as by Gregory, are Plato, Aristotle, the Stoics, Philo, Plotinus, and Origen, and his debt to one or more of these is evident on almost every page. Sometimes it is clear that the writer has some authority immediately at hand, not necessarily the original source, but an intermediate one, often a handbook such as was popular in his day, especially when technical details like the classifications of plants and animals are involved, or the list of the great rivers of the world. But it is also evident that the traditional theories of philosophy and science are not applied mechanically by Basil or Gregory to the problem under discussion,

⁹⁷ *Hex.*, 36B–40B. Evil, properly speaking, belongs to man's moral life.

since "the wisdom of the world" has been assimilated by them in such a way as to be an organic part of their intellectual life. One who reads any considerable portion of their text must be convinced of this, observing not only their actual doctrines but their vocabulary, their modes of expression, and, in general, the very atmosphere of their works. We can never forget Basil's studies during his earlier stay in Athens, and Gregory's early interest in Greek philosophy and poetry, confirmed no doubt by his sojourn with Basil in a monastic retreat.

In the cooperative enterprise of faith and reason in which both engaged, where are we to find the specific unity that results from employing the two sources of knowledge? Some have said that in Basil there is to be found a theological rather than a philosophical unity, since he remains as close as possible to the Scriptural text, whereas Gregory looks for a systematic and consistent philosophical explanation of the words of Moses.⁹⁸ Aside from the fact that we should not underestimate the more popular purpose of Basil's homilies, this difference between the two is only a relative one, since the unity of either is to be found in the particular amalgamation of faith and reason that we can discover in his text. For while Basil allows Scripture to determine his choice and understanding of philosophical doctrines, he, like Gregory, approaches Scripture from a certain determined point of view. In effect, he tells us, first, that the words of Moses are not always entirely clear; second, that even if they were, they apply only imperfectly to the ineffable reality of God; and, third, that even if the words had a more adequate application, we are permitted, and are even urged by Moses, to make inferences from what he tells us explicitly. Basil, therefore, permits himself a much greater freedom of rational interpretation than his more cautious statements indicate; such freedom is even more typical of Gregory. Even the fundamental notion of creation, so powerful in its influence on a Christian cosmology, is not a *deus ex machina*, reposing serenely above the struggle of conflicting points of view and descending to rescue its favorite. Although the concept of creation gives, it is true, a basically different orientation to a Christian cosmology, it is a concept that not only determines the other elements in the framework of cosmology, but is also determined by them. This determinability of "creation" applies both to its basic meaning, as, for instance, how far we can employ the analogy of the human craftsman, and to the relative emphasis to be placed on the individual components of the concept; in both of these respects there has

⁹⁸ E.g., Giet, *op. cit.*, pp. 20-32, esp. p. 31, n. 3. But Courtonne, *op. cit.*, p. 242, n. 98, after making a detailed study of Basil's rhetoric in the *Hex.*, finds, "à défaut d'unité philosophique, une unité littéraire."

been much variation. So each element of a Christian cosmology, including "creation," has had to make its own way in the history of thought.

What then have the Cappadocians contributed to the development of a Christian cosmology? One example from their philosophy may suggest an answer to this very complex question, namely, their idea of time. Plotinus, as noted earlier, had defined time as an extension of the universal soul that creates and envelops the motion of the universe. For Basil and Gregory there is no universal soul and only God creates. What remains, then, is simply an extension that envelops motion. Since, however, they use the Stoic term, *διάστημα*, rather than the Plotinian, *διάστασις*, it has been assumed that we have here a view that is to a considerable extent Stoic, whereas it is really Plotinian with the elimination of what could not be accepted. To this is added the Platonic notion of "receptacle," which Plato uses for space, not time; but Plotinus, as we saw, brings the two together when he says that material things must be in both. So, as Gregory puts it, more explicitly than Basil, God creates the universe in the twofold receptacle of space and time, and all the motion of the universe is enveloped by time.⁹⁹ All of this seems very natural, but on closer consideration one can feel that a vacuum is produced by the elimination of soul at this stage of the Platonic tradition in a theory of time.

When we look for a moment at St. Augustine, at a somewhat later date, we see that the vacuum has been filled, since time has been transferred expeditiously to the human soul. Here it is not a creative power, as in Plotinus, but one that measures motion by a threefold activity: memory of the past, attention to the present, and anticipation of the future.¹⁰⁰ There is, of course, an objective aspect of time, namely, the inability of material things to exist except in succession, a succession that is measured by the soul's activity. But his definition of time is a "distention of the mind" (*distentio animi*), the equivalent in his terms of Plotinus' *διάστασις ζωῆς*, and the aspect of time emphasized by him is the psychological. If we seek the reason for this shift of time to the psychological realm, one obvious answer would be Augustine's faculty of analyzing the details of man's inner life. But it may be possible to discover a wider reason than this, and indeed we find, perhaps to our surprise, that the Cappadocians do suggest such a reason and also offer some illumination for the problem of time.

There is no doubt that for them time is primarily objective, cosmological

⁹⁹ See n. 32 *supra*.

¹⁰⁰ *Confessions*, XI, 28. Augustine's doctrine of time and its relation to that of Plotinus are discussed by J. F. Callahan, *Four Views of Time in Ancient Philosophy* (Cambridge, Mass., 1948), pp. 149–187, 200–202.

rather than psychological. But let us look at a passage in Gregory,¹⁰¹ where another aspect of time comes to our attention. He distinguishes eternal and temporal being by pointing out that past and future do not apply to eternal being; for these are properties of created being, and have reference to *anticipation* (ἐλπίς) and *memory* (μνήμη) in a life that is divided by time. But the lofty and blessed nature, to which everything is present, has its past and *anticipation* (προσδοκώμενον) included in its all-embracing power. The terms that Gregory substitutes for “past” and “future” refer clearly to the same mental phenomena as Augustine’s *memoria* and *expectatio*. Time is thus conceived as having an especial reference to human life, not human life as participating in the same flux as the non-human universe, but rather as alone possessing a power of spiritual projection through which past and future tend to be equated with memory and anticipation as manifestations of the soul’s divided life. The equation of these terms enables us to see how Gregory foreshadows Augustine’s psychological view of time (which is, after all, not so original as we may have thought), and how he has begun to fill the vacuum left by the elimination of the Plotinian soul.

As for the broader reason for this shift in the meaning of time we must

¹⁰¹ *Contra Eunomium*, I, 371–372, ed. Jaeger, I, 130, 2–15 (PG, XLV, 368A–B). Among the other passages setting forth Gregory’s special point of view see, e.g., *ibid.*, II, 459, ed. Jaeger, I, 344, 21–345, 5 (PG, XLV, 1064C–D); *In Ecclesiasten*, Hom. VII, PG, XLIV, 729C–D. Gregory’s emphasis on the relevance of time to the human soul is due not only to his own powers of introspection, but also to the very natural contrast that arises between time and eternity as two forms of life, a heritage he may receive from Plotinus (*Enneads*, III, 7), and one that is especially useful to him in his discussions of the divine life directed against the Arian heresy. The basic element of the Augustinian view of time is thus already to be found in Gregory, that is, the tendency to equate the parts of time with psychological activities. (Balthasar, *op. cit.*, p. 6, n. 1, thus falls short of assigning to Gregory what is really distinctive in his view of time.) Though Gregory may in fact be said to anticipate Augustine in this matter, there remains a difficult historical question, namely, whether Augustine was actually influenced by the specific views of Gregory, and, if so, how he came to know them. At present it is not possible to offer an entirely satisfactory answer to this question. It may be said, however, that a greater influence of the Cappadocians on Western thought will have to be recognized, whatever means of communication may have existed for this purpose. E.g., Giet, *op. cit.*, p. 70, n. 2, points out that insufficient attention has thus far been paid to the use Augustine made of Basil’s *Hex.* in the Latin translation of Eustathius. No one, moreover, seems to have noted that Augustine, *Confessions*, XI, 23, when speaking of the learned man who said that the motions of the sun, moon, and stars are “times,” is really referring to Eunomius, as quoted by Basil, *Adversus Eunomium*, I, 21, PG, XXIX, 557C–560C (cf. *ibid.*, I, 19, PG, XXIX, 553C, and the words of Eunomius himself, *Liber apologeticus*, PG, XXX, 845B). As a matter of fact, Augustine’s whole chapter has been taken, with some modifications, from the chapter of Basil. It may be more than coincidence that this clear case of borrowing on Augustine’s part also involves the problem of time. But such questions as Gregory’s intermediation between Plotinus and Augustine and Augustine’s use of the chapter from Basil are too extensive to be taken up here, and I treat them elsewhere, as in an article on Basil and Augustine appearing in the *Harvard Studies in Classical Philology*, LXIII (Cambridge, Mass., 1958).

look at the orientation of the Cappadocian cosmology. The universe does not exist for its own sake but for the sake of man and the destiny he must work out for himself by life in the universe. The universe must, therefore, be explained in terms of man, and if the universe exists in succession, that is, in time, this feature of the universe's reality must be related to the pilgrimage of man on earth. This new importance of man in the universe is supported by the denial that the universe is a living organism, and that the heavenly bodies are rational, a view that had been held by even so recent a thinker as Origen.¹⁰² Thus we have abandoned the ancient doctrine that man is the microcosm, with the universe as macrocosm, because he alone is the image of God.¹⁰³ It is not accidental that Basil emphasizes both the emergence of plants from the earth *before* the sun was created¹⁰⁴ and the statement of Moses that the *earth* produced a living soul.¹⁰⁵ The earth, man's abode, has become more important to Basil than the heavenly bodies. He does not let us forget, either, that before the sun existed there was light, and also the sequence of day and night.¹⁰⁶

We have, therefore, a new anthropocentrism in the field of cosmology, of which the transformed doctrine of time is but one example. Cosmology cannot be considered quite independently of anthropology, since man is the very reason for the existence of the universe, or of a philosophy of history, since the endurance and eventual consummation of the universe will be fitted to the destiny of the human race.¹⁰⁷ Through a strongly personal conception of creation, by which God, with intelligence and free will, creates the universe for the good of the human soul, man is given by the Cappadocians a specific and clear-cut purpose for existing, and the universe thereby achieves a new significance.

GEORGETOWN UNIVERSITY
Washington, D. C.

¹⁰² *De principiis*, I, 3, ed. Koetschau, *Die griechischen christlichen Schriftsteller der ersten drei Jahrhunderte*, Origenes Werke, V (Leipzig, 1913), 87, 24–89, 11. Contrast what Basil has to say on this subject, *Hex.*, 132D.

¹⁰³ Gregory, *De hominis opificio*, 16, PG, XLIV, 177D–180A. See Cherniss, *op. cit.*, p. 29.

¹⁰⁴ *Hex.*, 96B.

¹⁰⁵ The earth produced the animal soul not because it had a soul itself, Basil is careful to say, but only because God gave it this power, *Hex.*, 164C–165A.

¹⁰⁶ *Hex.*, 137A. Philo, *De opificio mundi*, 45–46, ed. Cohn, pp. 14, 5–15, 7, makes some of these same points, saying that God in His providence foresaw that men might ascribe undue powers to the heavenly bodies.

¹⁰⁷ Gregory especially has definite views on the moral and historical aspects of time. See, e.g., *De hominis opificio*, PG, XLIV, 205B–208A, 209B–D; *De anima et resurrectione*, PG, XLVI, 92A–B; *De mortuis*, PG, XLVI, 524B. For Basil cf. n. 17 *supra*.